3. SITE INVESTIGATION PROGRAM

This section details the site investigation program implemented at Parcel D. The Parcel D site investigation was conducted in accordance with the approved Parcel D Sampling and Analysis Plan (SAP) dated May 9, 1999 (IESI 1999e). The investigation consisted only of soil sampling. Sampling locations and chemical analyses were selected based on a review of past operations and land uses of the area.

The soil boring logs and geologic observations made during the site investigation are presented in Appendix A. Details of the sampling program follow.

3.1 SAMPLE LOCATIONS

Soil samples were collected from predetermined locations within Parcel D, based on past or present operations, and the samples were analyzed for constituents of environmental interest related to those operations. The analytical data collected were used to meet the objectives specified in Section 1.

The areas identified for potential environmental concern in Parcel D included Building 59A and the Storage Yard. The soil boring locations collected at these areas and the sampling rationale are presented below.

3.1.1 Building 59A

Building 59A, which is in the north-central section of the parcel, was used as a maintenance facility before being converted to a hazardous-waste storage facility. According to a 1986 drawing, a 1,000-gallon "drainage tank" was located directly northwest of this building. The

drawing did not indicate the tank's contents or whether it was above or below ground. No other historical activities of concern have been identified at Building 59A.

Based on the historical and current usage of the building, soil samples were collected to assess any potential impacts (Figure 3-1). In Building 59A, one boring was advanced outside the northwest corner and one inside the building; samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and metals. Details concerning soil sampling are presented in Section 3.2.

3.1.2 Storage Yard

The storage yard housed airplane parts, scrap metal, several empty storage bins, a water tank, a light tower with transformer, and a trash compactor. The transformer had a blue label indicating it had been tested and certified as not containing PCBs.

Due to the historical storage of miscellaneous equipment and materials, eight soil borings were advanced throughout the storage yard to assess any potential impacts from current or historical activities (Figure 3-1). One of the eight borings (B7) was advanced at the location of the trash compactor. Soil samples were analyzed for VOCs, SVOCs, TPH, and metals. Details concerning soil sampling are presented in Section 3.2.

3.2 Soil Sampling and Analysis

Soil samples were collected at the locations described in Section 3.1 to evaluate whether operations-related constituents were present in those areas. Samples were collected from borings at specific locations and depths as discussed below. Borings were not advanced to depths greater than 25 feet bgs. The depth to groundwater at the site is approximately 65 feet bgs and therefore was not impacted by the soil boring activities.

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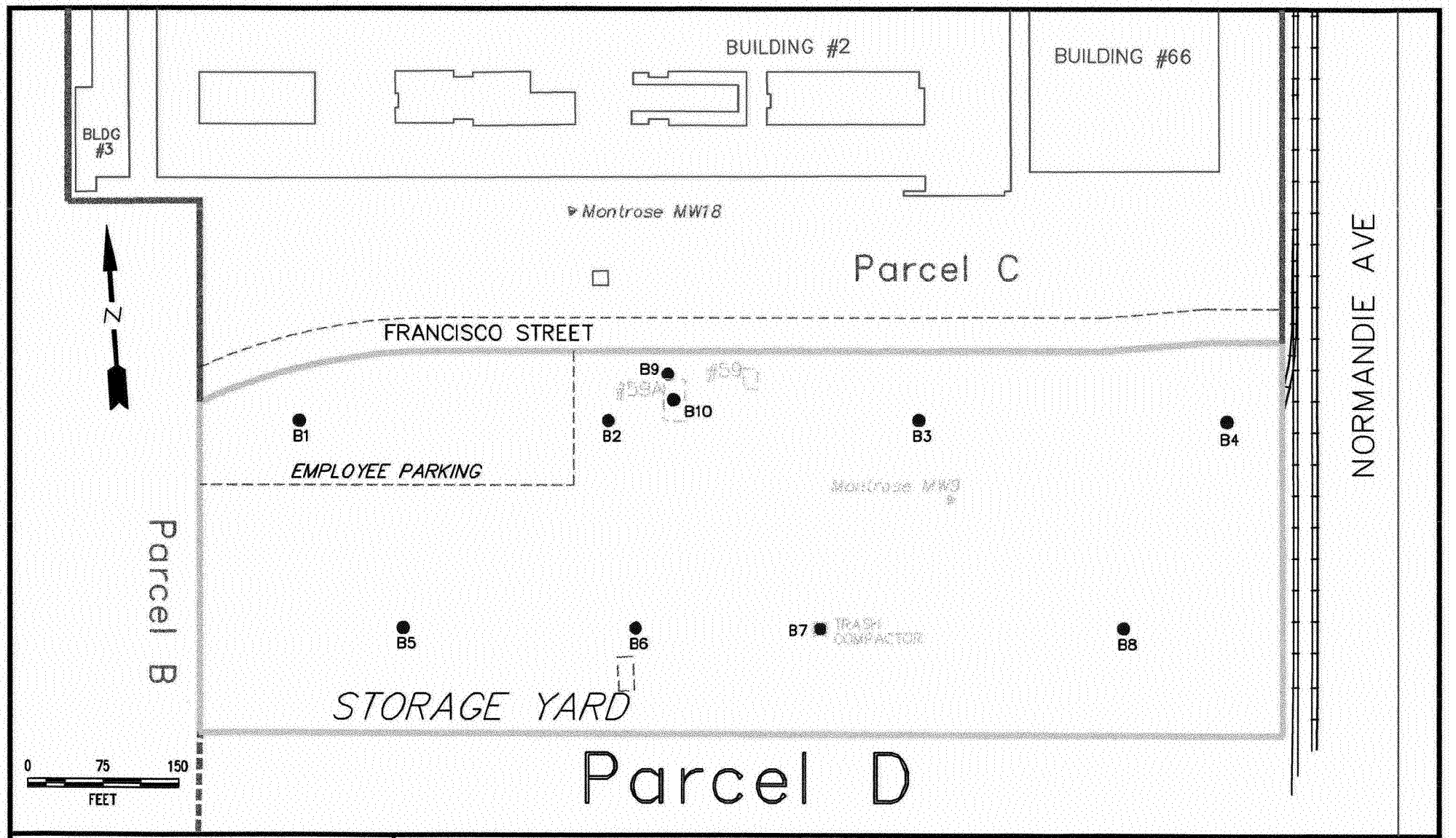

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TITLE:
Parcel D Soil Sample Locations
Boeing C-6 Facility
Los Angeles, CA

DWN:	DES.:	PROJECT NO.:
JDL	JDL	BOC6\PDSIR
CHK:	APPD:	FIGURE NO.:
JFH	JPO	3-1
DATE:	REV.:	
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Since most of the parcel had historically been used for storage and employee parking, a staggered sampling approach was used so that soil sample locations would be representative of previous site uses. As shown in Figure 3-1, the sampling approach consisted of placing two staggered rows of borings spaced approximately 200 feet apart, with the individual borings spaced approximately 300 feet apart. Sample results were compared to the Health-Based Remediation Goals (HBRGs) for surface soils (IESI 1997) to determine whether soils had been impacted by past operations.

It is important to note that the HBRG values have not been approved by DTSC as site cleanup goals and are used only for internal, soil-screening purposes. The use of these values does not guarantee DTSC approval of soil closure and are used at Boeing's own risk. It is understood by all parties that the findings of a parcel-specific, post-demolition risk assessment will establish whether Parcel D requires further remediation. The HBRGs are presented in Appendix B.

The following provides the details for the sampling and analysis of Parcel D. The details discussed include the sample location, number of borings, number of samples and sampling depths, and required laboratory analyses.

3.2.1 Building 59A

Before soil borings were advanced in Building 59A, the structure and foundation were removed. The sampling approach involved advancing two borings to a depth of 15 feet bgs and collecting soil samples at depths of 6 inches and 5, 10, and 15 feet. Eight soil samples were submitted to the laboratory and analyzed for VOCs, SVOCs, TPH, PCBs, and metals. One boring was advanced at the location of the former tank and one in the center of the waste storage area.

Table 3-1 summarizes the sampling and chemical analyses conducted at each location, while Figure 3-1 presents the sampling locations.

3.2.2 Storage Yard

The sampling approach for the storage yard involved advancing eight borings to a depth of 25 feet bgs and collecting soil samples at depths of 6 inches and 5, 10, 15, and 25 feet. Forty soil samples were submitted to the laboratory; however, only those samples collected between 6 inches and 15 feet bgs, and six samples collected at 25 feet bgs (from borings B1, B2, B4, B5, B7, and B8), were analyzed for VOCs, SVOCs, TPH, pesticides, and metals. The remaining two samples collected at 25 feet bgs (B3 and B6) were placed on hold at the laboratory, but since the concentrations detected in the associated 15-foot sample did not exceed the HBRGs, they were not analyzed.

TABLE 3-1
SOIL SAMPLING SUMMARY

Location	No. Borings	No. Sample Locations and Depths	No. Samples Analyzed	Chemicals Analyzed
Building 59A	2	8 at 6 in., 5, 10, & 15 ft	8	VOCs, SVOCs, TPH, PCBs, metals
Storage Yard	8	40 at 6 in., 5, 10, 15, & 25 ft	38*	VOCs, SVOCs, TPH, pesticides, metals

Note:
*Two soil samples collected at 25 feet bgs at borings B3 and B6 were not analyzed because concentrations detected in the associated 15-foot sample did not exceed the HBRGs.

Although there is no pesticide use in the history of operations at the C-6 facility, pesticides were manufactured at the Montrose Chemical facility located directly south of Parcel D. Therefore, the potential impacts of pesticides on the C-6 facility were assessed.

3.3 Quality Assurance/Quality Control Samples

Standard laboratory quality assurance/quality control (QA/QC) procedures were followed to ensure the quality of the analytical results obtained from all soil samples. In addition, four types of field QA/QC samples were collected and analyzed:

- Trip blanks
- Field blanks
- Equipment rinsates
- Field duplicates

Trip blanks were included with each cooler of samples shipped to the laboratory. The trip blank samples were analyzed for VOCs.

One field blank sample was collected from the water source used to decontaminate the field equipment. The field blank was analyzed for VOCs, SVOCs, TPH, PCBs, and metals.

One equipment rinsate sample was collected by pouring deionized water over and through the sample collection equipment after the equipment's final decontamination rinse and collecting the water in appropriate bottles. The equipment rinsate sample was analyzed for VOCs, SVOCs, TPH, PCBs, and metals.

Two field "duplicate" soil samples were collected by taking adjacent Tenite sleeves. The "duplicate" samples were analyzed for VOCs, SVOCs, TPH, PCBs, pesticides, and metals.

3.4 UTILITY SURVEY

Before any sampling or other intrusive activities were begun, a utility location survey was conducted to identify subsurface structures that may have impeded boring at the proposed sampling locations.

The proposed soil boring locations were marked at the site with stakes and flags. Prior to geophysical screening, site utility maps were reviewed. Underground Service Alert (USA) was given a request for utility clearance. After clearing the site with USA, the proposed soil boring locations were geophysically screened to further reduce the potential for encountering unknown, buried structures or subsurface utility lines. Selecting locations for some of the borings was complicated by the presence of demolition equipment, demolition activity, and partially

demolished structures. Only minor adjustments were made to the proposed locations. In general, the locations of the borings correspond well with the locations proposed in the SAP. The final locations are shown in Figure 3-1.

3.5 LAND SURVEY

The soil sampling locations were surveyed by a registered land surveyor using horizontal accuracies of ±0.1 feet. The surveyor generated a scaled base map of the site showing the locations of all surveyed features.